

What is claimed is:

- 1) A replaceable ink container for use in an off axis printing system, the printing system responsive to electrical signals from the replaceable ink container for controlling printer parameters, the ink container having a leading edge and a trailing edge relative to a direction of insertion into the printing system, the replaceable ink container comprising:
5 a plurality of electrical contacts disposed on the leading edge toward a first side, the plurality of electrical contacts configured for engaging corresponding electrical printer contacts associated with the printing system; and
a fluid outlet disposed on the leading edge toward a second side opposite the first
10 side and spaced from the plurality of electrical contacts, the fluid outlet in fluid communication with the replaceable ink container and configured for engaging a fluid inlet associated with the printing system.
- 2) The replaceable ink container of claim 1 wherein the leading edge has a major
15 axis with the first side and the second side being disposed on the major axis.
- 3) The replaceable ink container of claim 1 further including a latch feature, the ink container having an unlatched position and a latched position, with the latched position the latch feature is in engagement with corresponding engagement features associated
20 with the printing system wherein the electrical contact associated with the ink container engages corresponding printing system contacts and wherein the fluid outlet is in fluid communication with the fluid inlet associated with the printing system.
- 4) The replaceable ink container of claim 3 wherein the latch feature is a pair of latch
25 features with each of the pair of latch features disposed proximate the first and second side.

5) The replaceable ink container of claim 1 further including an information storage device electrically connected to the plurality of electrical contacts.

6) A replaceable ink container for use with a printing portion of an off axis printing system, the replaceable ink container having a docked position for providing ink to the printing portion and the printing portion responsive to electrical signals from the replaceable ink container for controlling printer parameters, the replaceable ink container comprising:

a fluid outlet portion for providing fluid to the printing portion, the fluid outlet portion being mounted rigidly relative to the ink container and is configured for engaging corresponding guiding features associated with printing portion to properly align the fluid outlet portion with corresponding fluid inlet portions associated with the printing portion; and

an electrical interface portion having a plurality of electrical contacts for transferring information between the replaceable ink container and the printing portion, the electrical interface portion including an engagement portion disposed opposite the plurality of electrical contacts, the electrical interface portion in the docked position engaging guiding features associated with the printing portion to position electrical contact portions associated with the printing portion in a biased relationship between the engagement portion and the plurality of electrical contacts to electrically engage the ink container with the printing portion without applying an unbalanced force on the ink container.

7) The replaceable ink container of claim 6 wherein the electrical interface portion is a cavity within an outer surface of the ink container, the cavity having inner surfaces defining the engagement surface and a surface having the plurality of electrical contacts disposed thereon.

- 8) The replaceable ink container of claim 6 wherein the fluid outlet portion is configured to receive fluid inlet portions associated with the printing portion along a fluid interconnect axis and wherein in normal use the electrical interface portion engagement with corresponding electrical contact portions associated with the printing portion provides substantially no forces acting on the ink container in a direction normal to the fluid interconnect axis.
- 9) The replaceable ink container of claim 6 wherein the ink container has a leading edge and a trailing edge relative to a direction of insertion into the printing portion and wherein the fluid outlet portion and the electrical interface portion are disposed on the leading edge.
- 10) The replaceable ink container of claim 9 wherein the ink container leading edge has a major axis and a minor axis with the fluid outlet portion disposed toward a first end of the major axis and the electrical interface portion disposed toward a second end of the major axis opposite the first end.
- 11) The replaceable ink container of claim 6 wherein the electrical interface portion is fixed relative to the replaceable ink container and electrical contact portions associated with the printing portion float relative to the replaceable ink container.
- 12) The replaceable ink container of claim 6 further including a latch feature wherein ink container has an unlatched position and a latched position, with the latched position the latch feature is in engagement with corresponding engagement features associated with the printing system wherein the electrical contact portions contact associated with the ink container engages corresponding printing system contacts and wherein the fluid outlet is in fluid communication with the fluid inlet associated with the printing system.

13) An off-axis type ink-jet printing system of the type having a printing portion for forming images on print media and a replaceable ink container for providing ink to the printing portion, the printing portion responsive to electrical signal from the ink container for controlling the printer portion parameters, the off-axis ink-jet printing system comprising:

an ink container having a reservoir for containing ink, the ink container having a leading edge and a trailing edge relative to a direction of insertion into the printing portion, the ink-jet printing system including:

an ink container including:

a plurality of electrical contacts disposed on the leading edge toward a first side; and

a fluid outlet disposed on the leading edge toward a second side opposite the first side and spaced from the plurality of electrical contacts; and

a printer portion, the printer portion including:

a fluid inlet configured for engaging the fluid outlet associated with the ink container; and

a plurality of electrical contacts supported by and electrical connector, the electrical connector having a selected amount of freedom of motion in a plane perpendicular to the direction of insertion of the ink container into the printer portion, the plurality of electrical contacts so disposed and arranged on the electrical connector to engage respective electrical contacts of the plurality of electrical contacts associated with the ink container properly inserted into the printer portion.

14) A method for inserting a replaceable ink container into a printer, the method comprising:

inserting the ink container into the printer so that an ink outlet and a plurality of electrical contacts associated with the ink container engage an ink inlet and an electrical connector, respectively, associated with the printer; and

further inserting the ink container so that the ink outlet is guided into the ink inlet to fluidically connect the replaceable ink container with the printer and to reposition the electrical connector into alignment with the plurality of electrical contacts so that the plurality of electrical contacts engage a corresponding plurality of contacts associated with the electrical connector electrically connecting the ink container and the printer.

15) A replaceable ink container for use with an off-axis printing system ,the replaceable ink container adapted to provide ink to a printing portion, the printing portion being responsive to electrical signals from the ink container for controlling printer parameters, the replaceable ink container comprising:

a fluid outlet portion for providing fluid to the printing portion, the fluid outlet portion being mounted rigidly relative to the ink container and is configured for engaging corresponding guiding features associated with the printing portion to properly align the fluid outlet portion with corresponding fluid inlet; and

15 a container electrical interface portion having a plurality of electrical contacts for transferring information between the replaceable ink container and the printing portion, the container electrical interface portion adapted to engage a system electrical interface portion without applying an unbalanced force on the ink container.

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